

SEQUENCE LISTING

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Serial No: Unassigned
Filed: Herewith, **AUGUST 21, 2001**
Title: **DIAGNOSIS AND TREATMENT OF
CARDIOVASCULAR CONDITIONS**
Express Mail No: **EL844533521US**

<120> DIAGNOSIS AND TREATMENT OF CARDIOVASCULAR CONDITIONS

<130> P0738/7001/ERP/KA

<150> US 60/227,159

<151> 2000-08-22

<160> 17

<170> FastSEQ for Windows Version 3.0

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<212> DNA

<213> Homo Sapiens

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tgagccccgc	ggcgccccgc	gaacttggcg	gcgaccagag	cccggcgagc	cggggcgcgc	300
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ccccggccgc	ccccgagccc	cccgcgcccc	gcgcgcgcgc	gccgcgccgt	cc atg cac	418
					Met His	
					1	

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Arg Leu Met	Gly Val Asn	Ser Thr Ala	Ala Ala Ala	Ala Ala Gly	Gln Pro	
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Asn Val Ser	Cys Thr Cys	Asn Cys Lys	Arg Ser Leu	Phe Gln Ser	Met	
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gag atc acg	gag ctg gag	ttt gtt cag	atc atc atc	atc atc gtg	gtg gtg	562
Glu Ile Thr	Glu Leu Glu	Phe Val Gln	Ile Ile Ile	Ile Ile Val	Val Val	
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atg atg gtg	atg gtg gtg	gtg atc acg	tgc ctg ctg	agc cac tac	aag	610
Met Met Val	Met Val Val	Val Ile Thr	Cys Leu Leu	Ser His Tyr	Lys	
	55		60		65	

ctg tct gca	cgg tcc ttc	atc agc cgg	cac agc cag	ggg cgg agg	aga	658
Leu Ser Ala	Arg Ser Phe	Ile Ser Arg	His Ser Gln	Gly Arg Arg	Arg	
	70		75		80	

gaa gat gcc	ctg tcc tca	gaa gga tgc	ctg tgg ccc	tcg gag agc	aca	706
Glu Asp Ala	Leu Ser Ser	Glu Gly Cys	Leu Trp Pro	Ser Glu Ser	Thr	

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100	105	110	
ccc acc gac cgc ctg gcc gtg ccg ccc ttc gcc cag cgg gag cgc ttc			802
Pro Thr Asp Arg Leu Ala Val Pro Pro Phe Ala Gln Arg Glu Arg Phe			
115	120	125	130
cac cgc ttc cag ccc acc tat ccg tac ctg cag cac gag atc gac ctg			850
His Arg Phe Gln Pro Thr Tyr Pro Tyr Leu Gln His Glu Ile Asp Leu			
	135	140	145
cca ccc acc atc tcg ctg tca gac ggg gag gag ccc cca ccc tac cag			898
Pro Pro Thr Ile Ser Leu Ser Asp Gly Glu Glu Pro Pro Pro Tyr Gln			
	150	155	160
ggc ccc tgc acc ctc cag ctt ccg gac ccc gag cag cag ctg gaa ctg			946
Gly Pro Cys Thr Leu Gln Leu Arg Asp Pro Glu Gln Gln Leu Glu Leu			
	165	170	175
aac cgg gag tcg gtg cgc gca ccc cca aac aga acc atc ttc gac agt			994
Asn Arg Glu Ser Val Arg Ala Pro Pro Asn Arg Thr Ile Phe Asp Ser			
	180	185	190
gac ctg atg gat agt gcc agg ctg ggc ggc ccc tgc ccc ccc agc agt			1042
Asp Leu Met Asp Ser Ala Arg Leu Gly Gly Pro Cys Pro Pro Ser Ser			
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Asn Ser Gly Ile Ser Ala Thr Cys Tyr Gly Ser Gly Gly Arg Met Glu			
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ggg ccg ccg ccc acc tac agc gag gtc atc ggc cac tac ccg ggg tcc			1138
Gly Pro Pro Pro Thr Tyr Ser Glu Val Ile Gly His Tyr Pro Gly Ser			
	230	235	240
tcc ttc cag cac cag cag agc agt ggg ccg ccc tcc ttg ctg gag ggg			1186
Ser Phe Gln His Gln Gln Ser Ser Gly Pro Pro Ser Leu Leu Glu Gly			
	245	250	255
acc cgg ctc cac cac aca cac atc gcg ccc cta gag agc gca gcc atc			1234
Thr Arg Leu His His Thr His Ile Ala Pro Leu Glu Ser Ala Ala Ile			
	260	265	270
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Trp Ser Lys Glu Lys Asp Lys Gln Lys Gly His Pro Leu			
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Val Val Met Met Val Met Val Val Ile Thr Cys Leu Leu Ser His					
	50		55		60
Tyr Lys Leu Ser Ala Arg Ser Phe Ile Ser Arg His Ser Gln Gly Arg					
65		70		75	80
Arg Arg Glu Asp Ala Leu Ser Ser Glu Gly Cys Leu Trp Pro Ser Glu					
	85		90		95
Ser Thr Val Ser Gly Asn Gly Ile Pro Glu Pro Gln Val Tyr Ala Pro					
	100		105		110
Pro Arg Pro Thr Asp Arg Leu Ala Val Pro Pro Phe Ala Gln Arg Glu					
	115		120		125
Arg Phe His Arg Phe Gln Pro Thr Tyr Pro Tyr Leu Gln His Glu Ile					
	130		135		140
Asp Leu Pro Pro Thr Ile Ser Leu Ser Asp Gly Glu Glu Pro Pro Pro					
145		150		155	160
Tyr Gln Gly Pro Cys Thr Leu Gln Leu Arg Asp Pro Glu Gln Gln Leu					
	165		170		175
Glu Leu Asn Arg Glu Ser Val Arg Ala Pro Pro Asn Arg Thr Ile Phe					
	180		185		190
Asp Ser Asp Leu Met Asp Ser Ala Arg Leu Gly Gly Pro Cys Pro Pro					
	195		200		205
Ser Ser Asn Ser Gly Ile Ser Ala Thr Cys Tyr Gly Ser Gly Gly Arg					
	210		215		220
Met Glu Gly Pro Pro Pro Thr Tyr Ser Glu Val Ile Gly His Tyr Pro					
225		230		235	240
Gly Ser Ser Phe Gln His Gln Gln Ser Ser Gly Pro Pro Ser Leu Leu					
	245		250		255
Glu Gly Thr Arg Leu His His Thr His Ile Ala Pro Leu Glu Ser Ala					
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Ala Ile Trp Ser Lys Glu Lys Asp Lys Gln Lys Gly His Pro Leu					
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ctgctgagcc actacaagct gtctgcacgg tccttcatca gccggcacag ccaggggagg	240
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gtgcccgcct tgcgccagcg ggagcgcttc caccgcttcc agccccaccta tccgtacctg	420
cagcagcaga tgcacctgcc acccaccatc tgcgtgtcag acggggagga gccccaccc	480
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gagtcgggtgc ggcacacccc aaacagaacc atcttcgaca gtgacctgat ggatagtgcc	600
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gggtcctcct tccagcacca gcagagcagt gggccgcct ccttgctgga ggggacccgg	780
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 <213> Homo Sapiens

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 cag gcc ccg acc ccg gcc ccc tcc acc atc ccg gga ccc ccg ccg gcc 96
 Gln Ala Pro Thr Pro Ala Pro Ser Thr Ile Pro Gly Pro Arg Arg Gly
 15 20 25 30
 tcc ggt cct gag atc ttc acc ttc gac cct ctc ccg gag ccc gca gcc 144
 Ser Gly Pro Glu Ile Phe Thr Phe Asp Pro Leu Pro Glu Pro Ala Ala
 35 40 45
 gcc cct gcc ggg cgc ccc agc gcc tct cgc ggg cac cga aag cgc agc 192
 Ala Pro Ala Gly Arg Pro Ser Ala Ser Arg Gly His Arg Lys Arg Ser
 50 55 60
 cgc agg gtt ctc tac cct cga gtg gtc ccg cgc cag ctg cca gtc gag 240
 Arg Arg Val Leu Tyr Pro Arg Val Val Arg Arg Gln Leu Pro Val Glu
 65 70 75
 gaa ccg aac cca gcc aaa agg ctt ctc ttt ctg ctg ctc acc atc gtc 288
 Glu Pro Asn Pro Ala Lys Arg Leu Leu Phe Leu Leu Thr Ile Val
 80 85 90
 ttc tgc cag atc ctg atg gct gaa gag ggt gtg ccg gcg ccc ctg cct 336
 Phe Cys Gln Ile Leu Met Ala Glu Glu Gly Val Pro Ala Pro Leu Pro
 95 100 105 110
 cca gag gac gcc cct aac gcc gca tcc ctg gcg ccc acc cct gtg tcc 384
 Pro Glu Asp Ala Pro Asn Ala Ala Ser Leu Ala Pro Thr Pro Val Ser
 115 120 125
 ccc gtc ctc gag ccc ttt aat ctg act tcg gag ccc tcg gac tac gct 432
 Pro Val Leu Glu Pro Phe Asn Leu Thr Ser Glu Pro Ser Asp Tyr Ala
 130 135 140
 ctg gac ctc agc act ttc ctc cag caa cac ccg gcc gcc ttc 474
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 145 150 155
 taa 477

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 <213> Homo Sapiens

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Ala	Gly	Arg	Pro	Ser	Ala	Ser	Arg	Gly	His	Arg	Lys	Arg	Ser	Arg	Arg
	50					55					60				
Val	Leu	Tyr	Pro	Arg	Val	Val	Arg	Arg	Gln	Leu	Pro	Val	Glu	Glu	Pro
65					70					75					80
Asn	Pro	Ala	Lys	Arg	Leu	Leu	Phe	Leu	Leu	Leu	Thr	Ile	Val	Phe	Cys
				85					90					95	
Gln	Ile	Leu	Met	Ala	Glu	Glu	Gly	Val	Pro	Ala	Pro	Leu	Pro	Pro	Glu
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Asp	Ala	Pro	Asn	Ala	Ala	Ser	Leu	Ala	Pro	Thr	Pro	Val	Ser	Pro	Val
	115						120					125			
Leu	Glu	Pro	Phe	Asn	Leu	Thr	Ser	Glu	Pro	Ser	Asp	Tyr	Ala	Leu	Asp
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ccttaaagtg	aaataatttt	ttgcaaaggg	gtttcctcga	tttgagactt	tttttttctt	180
ccaccgtcat	ttctaactct	taaaaccaac	tcagttccat	c atg gtg atg ttc aag		236
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				1	5	
aag atc aag tct ttt gag gtg gtc ttt aac gac cct gaa aag gtg tac						284
Lys Ile Lys Ser Phe Glu Val Val Phe Asn Asp Pro Glu Lys Val Tyr						
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ggc agt ggc gag agg gtg gct ggc cgg gtg ata gtg gag gtg tgt gaa						332
Gly Ser Gly Glu Arg Val Ala Gly Arg Val Ile Val Glu Val Cys Glu						
	25		30		35	
gtt act cgt gtc aaa gcc gtt agg atc ctg gct tgc gga gtg gct aaa						380
Val Thr Arg Val Lys Ala Val Arg Ile Leu Ala Cys Gly Val Ala Lys						
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gtg ctt tgg atg cag gga tcc cag cag tgc aaa cag act tcg gag tac						428
Val Leu Trp Met Gln Gly Ser Gln Gln Cys Lys Gln Thr Ser Glu Tyr						
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ctg cgc tat gaa gac acg ctt ctt ctg gaa gac cag cca aca ggt gag						476
Leu Arg Tyr Glu Asp Thr Leu Leu Leu Glu Asp Gln Pro Thr Gly Glu						
	70		75		80	85
aat gag atg gtg atc atg aga cct gga aac aaa tat gag tac aag ttc						524
Asn Glu Met Val Ile Met Arg Pro Gly Asn Lys Tyr Glu Tyr Lys Phe						
	90		95		100	
ggc ttt gag ctt cct cag ggg cct ctg gga aca tcc ttc aaa gga aaa						572

Gly	Phe	Glu	Leu 105	Pro	Gln	Gly	Pro	Leu 110	Gly	Thr	Ser	Phe	Lys 115	Gly	Lys	
tat Tyr	ggg Gly	tgt Cys 120	gta Val	gac Asp	tac Tyr	tgg Trp	gtg Val 125	aag Lys	gct Ala	ttt Phe	ctt Leu	gac Asp 130	cgc Arg	ccg Pro	agc Ser	620
cag Gln	cca Pro 135	act Thr	caa Gln	gag Glu	aca Thr	aag Lys 140	aaa Lys	aac Asn	ttt Phe	gaa Glu 145	gta Val	gtg Val	gat Asp	ctg Leu	gtg Val	668
gat Asp 150	gtc Val	aat Asn	acc Thr	cct Pro	gat Asp 155	tta Leu	atg Met	gca Ala	cct Pro	gtg Val 160	tct Ser	gct Ala	aaa Lys	aaa Lys	gaa Glu 165	716
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gct Ala	cga Arg	att Ile	gac Asp 185	aga Arg	aaa Lys	gga Gly	ttc Phe	tgt Cys 190	gaa Glu	ggt Gly	gat Asp	gag Glu	att Ile 195	tcc Ser	atc Ile	812
cat His	gct Ala	gac Asp 200	ttt Phe	gag Glu	aat Asn	aca Thr	tgt Cys 205	tcc Ser	cga Arg	att Ile	gtg Val 210	gtc Val	ccc Pro	aaa Lys	gct Ala	860
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ctg Leu 230	act Thr	cag Gln	aag Lys	ttg Leu	tca Ser 235	tca Ser	gtc Val	aga Arg	ggc Gly	aat Asn 240	cat His	att Ile	atc Ile	tca Ser	ggg Gly 245	956
aca Thr	tgc Cys	gca Ala	tca Ser	tgg Trp 250	cgt Arg	ggc Gly	aag Lys	agc Ser	ctt Leu 255	cgg Arg	gtt Val	cag Gln	aag Lys	atc Ile 260	agg Arg	1004
cct Pro	tct Ser	atc Ile	ctg Leu 265	ggc Gly	tgc Cys	aac Asn	atc Ile	ctt Leu 270	cga Arg	gtt Val	gaa Glu	tat Tyr	tcc Ser 275	tta Leu	ctg Leu	1052
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ctg Leu	gta Val 295	att Ile	ggc Gly	agc Ser	aga Arg	tca Ser 300	ggt Gly	cta Leu	agc Ser	agc Ser	aga Arg 305	aca Thr	tcc Ser	agc Ser	atg Met	1148
gcc Ala 310	agc Ser	cga Arg	acc Thr	agc Ser	tct Ser 315	gag Glu	atg Met	agt Ser	tgg Trp	gta Val 320	gat Asp	ctg Leu	aac Asn	atc Ile	cct Pro 325	1196
gat Asp	acc Thr	cca Pro	gaa Glu	gct Ala 330	cct Pro	ccc Pro	tgc Cys	tat Tyr	atg Met 335	gat Asp	gtc Val	att Ile	cct Pro	gaa Glu 340	gat Asp	1244
cac His	cga Arg	ttg Leu	gag Glu	agc Ser	cca Pro	aca Thr	act Thr	cct Pro	ctg Leu	cta Leu	gat Asp	gac Asp	atg Met	gat Asp	ggc Gly	1292

345

350

355

tct caa gac agc cct atc ttt atg tat gcc cct gag ttc aag ttc atg 1340
Ser Gln Asp Ser Pro Ile Phe Met Tyr Ala Pro Glu Phe Lys Phe Met
360 365 370

cca cca ccg act tat act gag gtg gat ccc tgc atc ctc aac aac aat 1388
Pro Pro Pro Thr Tyr Thr Glu Val Asp Pro Cys Ile Leu Asn Asn Asn
375 380 385

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Val Gln
390

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<211> 391

<212> PRT

<213> Homo Sapiens

<400> 7

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Val Glu Val Cys Glu Val Thr Arg Val Lys Ala Val Arg Ile Leu Ala
35 40 45
Cys Gly Val Ala Lys Val Leu Trp Met Gln Gly Ser Gln Gln Cys Lys
50 55 60
Gln Thr Ser Glu Tyr Leu Arg Tyr Glu Asp Thr Leu Leu Leu Glu Asp
65 70 75 80
Gln Pro Thr Gly Glu Asn Glu Met Val Ile Met Arg Pro Gly Asn Lys
85 90 95
Tyr Glu Tyr Lys Phe Gly Phe Glu Leu Pro Gln Gly Pro Leu Gly Thr
100 105 110
Ser Phe Lys Gly Lys Tyr Gly Cys Val Asp Tyr Trp Val Lys Ala Phe
115 120 125
Leu Asp Arg Pro Ser Gln Pro Thr Gln Glu Thr Lys Lys Asn Phe Glu
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Val Val Asp Leu Val Asp Val Asn Thr Pro Asp Leu Met Ala Pro Val

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<213> Homo Sapiens

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          Met Ser His Gly Lys Gly Thr Asp Met Leu Pro Glu Ile
              1              5              10

gcc gcc gcc gtg ggc ttc ctc tcc agc ctc ctg agg acc cgg ggc tgc      158
Ala Ala Ala Val Gly Phe Leu Ser Ser Leu Leu Arg Thr Arg Gly Cys
          15              20              25

gtg agc gag cag agg ctt aag gtc ttc agc ggg gcg ctc cag gag gca      206
Val Ser Glu Gln Arg Leu Lys Val Phe Ser Gly Ala Leu Gln Glu Ala
          30              35              40              45

ctc aca gag cac tac aaa cac cac tgg ttt ccc gaa aag ccg tcc aag      254
Leu Thr Glu His Tyr Lys His His Trp Phe Pro Glu Lys Pro Ser Lys
              50              55              60

ggc tcc ggc tac cgc tgc att cgc atc aac cac aag atg gac ccc atc      302

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		80					85					90				
cag	ctg	ctg	ccc	agc	gag	ctg	acc	ctg	tgg	gtg	gac	ccc	tat	gag	gtg	398
Gln	Leu	Leu	Pro	Ser	Glu	Leu	Thr	Leu	Trp	Val	Asp	Pro	Tyr	Glu	Val	
	95					100					105					
tcc	tac	cgc	att	ggg	gag	gac	ggc	tcc	atc	tgc	gtc	ttg	tac	gag	gag	446
Ser	Tyr	Arg	Ile	Gly	Glu	Asp	Gly	Ser	Ile	Cys	Val	Leu	Tyr	Glu	Glu	
110					115					120					125	
gcc	cca	ctg	gcc	gcc	tcc	tgt	ggg	ctc	ctc	acc	tgc	aag	aac	caa	gtg	494
Ala	Pro	Leu	Ala	Ala	Ser	Cys	Gly	Leu	Leu	Thr	Cys	Lys	Asn	Gln	Val	
			130					135						140		
ctg	ctg	ggc	cgg	agc	agc	ccc	tcc	aag	aac	tac	gtg	atg	gca	gtc	tcc	542
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Pro Ser Met Glu Ile Thr Glu Leu Glu Phe Val Gln Ile Val Val Ile
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Val Val Val Met Met Val Met Val Val Met Ile Thr Cys Leu Leu Ser
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